PORTABLE VERSIONS OF MITRAILLETTE: ENVIRONMENT FILES, USER'S GUIDE AND LIST OF CONFIGURATIONS TO BE VALIDATED (VERSION VALID FOR CY42).

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Valid for cycle cy42.
Physics cf. cy40_op2.

1 Introduction.

With the help of our HIRLAM partners, a portable version of MITRAILLETTE has been implemented in 2008, after a former version of MITRAILLETTE: it is designed to do a list of validations for LAM models. Additionally, a portable version of MITRARP has been implemented in February 2009, designed for ARPEGE validations; its design is identical to the one of MITRAILLETTE. During the first term of 2014, both environments have been merged into one, so MITRAILLETTE can be now used for both global model and LAM model validations.

The current design of MITRAILLETTE allows to use it on different machines with minimal adaptations concentrated in a reduced number of environment files: that allows a minimal amount of work when scripts must be adapted to a new machine.

This document explains how to use MITRAILLETTE, and gives an extensive list of validated configurations.

Use of the following procedures assumes that the following variables are defined in .bash_profile of the machine where validation is done:

```
export STATION=[name of the machine]
export SHOME=${HOME}/SAVE
export PMAHOME=/home/gmap/mrpm/marguina
export REKHOME=/home/gmap/mrpm/khatib
```

Modifications since the last version:

- Update physics to match operational suite changes (AR1T only).
- AR1T: some changes in the list of tested jobs.

2 File environment and user's guide for MITRAILLETTE.

∗ **List of files:** On the machine where validation is done, a directory ${HOME}/mitraille must be created. Under this directory one must find the following files and call tree (example is given for CY42 validation):

```
cy42 (dir)
mitra_home_location
mitraillette_v032015.x
namelist/cy42/nam...
PRO_FILE.cy42_arpmonoref
PRO_FILE.cy42_arpmultiref
PRO_FILE.cy42_arpmultiref_dila
PRO_FILE.cy42_aldmonoref
PRO_FILE.cy42_aldmultiref
protojobs_v032015/job..

protojobs_v032015/[computer name]/config
protojobs_v032015/[computer name]/jobtrailer
protojobs_v032015/[computer name]/memtable
protojobs_v032015/[computer name]/monoheader
protojobs_v032015/[computer name]/multiheader
protojobs_v032015/[computer name]/timetable
```

More details about these files:

- mitra_home_location: this environment file contains the directory where the "mitraillette" procedure and the above arborescence are stored.
- mitraillette_v032015.x is the main procedure launching MITRAILLETTE: it requires three arguments: the cycle (in uppercase characters), the PRO_FILE file, and a third argument which is equal to "mono" (if only monoprocessor jobs are launched), "multi" (if only multiprocessor jobs are launched), "all" (if both monoprocessor and multiprocessor jobs are launched).
- The PRO_FILE... are files containing the list of tasks to be launched and the executable to be used for each task. Each task has a four-digits code (example "mhlj"). Each line contains the four-digits code, the original executable name, and the actual executable name (complete path required) to be used.

- The directory "namelist/cy42" contains a list of namelists which should be norm-compliant (see documentation (IDARC)).
- The directory "protojobs_v032015" contains a list of scripts.
- The directory "protojobs_v032015/[computer name]" contains a list of environment files:
  - file "config": gives information about directories where some files must be found or stored, modified definitions of some commands (doing file copy, task launching for example), and definition of some other environment variables.
  - file "jobtrailer" contains the right version of "ja" (to have CPU and memory use).
  - file "monoheader" contains the script header for monoprocessor jobs.
  - file "multiheader" contains the script header for multiprocessor jobs.
  - file "memtable" contains information about memory allocation for each job.
  - file "timetable" contains information about elapsed time and CPU time requirements for each job.

  All these files have a content which may depend on the machine.

The content of namelists and "protojobs.." scripts must not be machine dependent.

Additionally to that a directory is required to store executables and another one to store input files (initial files, coupling files, climatological files for example).

Example of where to find the scripts and files (beaufix):

- Scripts can be found on yessadk/mitraille/protojobs_v032015
- Namelists can be found on yessadk/namelist/[cycle]
- Files PRO_FILE.. can be found for example on yessadk/mitraille
- ARPEGE and LAM model files can be found on yessadk/anal_a_mitraille
- Files containing some constant values can be found on yessadk/const.
- Files "config", "jobtrailer", "monoheader", "multiheader", "memtable" and "timetable" can be found on yessadk/mitraille/protojobs_v032015/beaufix.

∗ **How to launch MITRAILLETTE:** We consider the following example:

- Validate on machine "beaufix" a oper-type configuration 001 (task "ag1t"); multiprocessor job only.
- The user is mrpx888.
- Validation on cycle 42.
- Use the executable mrpx888/executable/cy42_master-main.01.IMPI411IFC1301_ref.x.exe

Actions to be done:

- File mrpx888/mitraille/PRO_FILE.cy42_aldmultiref must contain the following line:
  ag1t cy42_master-main.01.IMPI411IFC1301.x.exe ${HOME}/executable/cy42_master-main.01.IMPI411IFC1301_ref.x.exe
- Launch MITRAILLETTE as follows (go to directory mrpx888/mitraille):
  mitraillette_v032015.x CY42 PRO_FILE.cy42_aldmultiref multi

Some environment files are created, with a experiment number (for example we consider that this four digit number is 4407):

- On directory mrpx888/mitraille: rank_file.x4407, job_end.x4407, test.x4407, log_fild_CY42_4407, log_file_CY42_4407, rank_last.x4407, mitraillette.o4407, mitra_home_location.
- On directory mrpx888/mitraille/cy42/mitraille_4407:
  chainjob_000

Launch procedure test.x4407: it launches chainjob_000 on "beaufix". The output file will be stored on directory mrpx888/mitraille/cy42/mitraille_4407.

3 List of jobs in MITRAILLETTE:

This document gives the ARPEGE and LAM configurations which must be validated. We recall the different freedom degrees for distributed environment:

- NPROC: the total number of processors (without the IO_SERV processors).
- NPROC_IO: the number of processors used by the IO server.
- NPROC+NPROC_IO: the total number of processors used by the run.
- In the MITRAILLETTE script, NBPROCT, NBPROCA, NBPROCS respectively match NPROC, NPROC_IO, NPROC+NPROC_IO.
- We use below denotation dm[NBPROCS]. For example, dm32 means NBPROCS=32.
- The A and B level of distribution (namelist variables NPRGPEW, NPRGPNS, NPRTRW, NPRTRV) are no longer explicitly given; they do not appear in the MITRAILLETTE environment and they are automatically computed. We assume that all runs using NPROC>1 have both A and B level of distribution.
- The total number of processors NBPROCS is spread among nodes and cores. NBNODES denotes the number of nodes.
  We use below denotation [NBNODES] nd.
- NB_THREADS is the total number of OpenMp threads.
  We use below denotation [NB_THREADS] td.
- Profiles are now chosen in order to run on all cores in the selected nodes.
- Example for task MHLJ: "dm32; 16 nd; 12 td" means that NBPROCS=32, NPROC=32; 16 nodes are used; there are 2 processors and 12 OpenMp threads used per node.
- Example for task MHLI which uses 4 processors for IO server: "dm32; 16 nd; 12 td" means that NBPROCS=32, NBPROCT=NPROC=28, NPROC_IO=4; 16 nodes are used; there are 2 processors and 12 OpenMp threads used per node.

Information about options used when not mentioned:

- LMPOFF=F.
- LSLONDEM=T (for semi-Lagrangian jobs).
- LECHKEVO=F.
- ND4SYS: Runs with LGWADV=T and 1 iteration of PC-cheap generally run with ND4SYS=2; otherwise ND4SYS=1 (NH with NVDVAR=4).
- RCMSLP0: 1 for SL, 0 for EUL.
- Conf 601: L_USE_CONGRAD=T.
- Domain for global model: ARPEGE-METROPOLE (c=2.4).
- Horizontal diffusion for NH models, always matches: RDAMPVD=RDAMPDIV; RDAMPPD=RDAMPT=RDAMPVOR.

3.1 Domains, resolutions, files, scripts and namelists involved in each configuration, for global model.

Scripts and namelists are not given extensively, but name is generally:

- Script: jobg_[code].
- Namelist: namg_[code].

Examples:

- jobg_c901: configuration 901.

3.1.1 AHEA: Hydrostatic adiabatic forecast with EUL advection scheme, unstretched geometry.

- Resolution: TL031L15c1.
- Range NSTOP=8, Δt=900 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial file: B0312005071500L.C010.032l.L15.

3.1.2 AHSA: Hydrostatic adiabatic forecast with SL3TL advection scheme, unstretched geometry.

- Resolution: TL031L15c1.
- Range NSTOP=8, Δt=900 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial file: B0312005071500L.C010.032l.L15.

3.1.3 AHLA: Hydrostatic adiabatic forecast with SL2TL advection scheme, unstretched geometry.

- Resolution: TL031L15c1.
- Range NSTOP=8, Δt=900 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial file: B0312005071500L.C010.032l.L15.

3.1.4 AHEH: Hydrostatic adiabatic forecast with EUL advection scheme, stretched geometry.

- Resolution: TL030L15c2.4.
- Range NSTOP=24, Δt=450 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial file: B0302005071500L.C024.032l.L15.

3.1.5 AHSH: Hydrostatic adiabatic forecast with SL3TL advection scheme, stretched geometry.

- Resolution: TL030L15c2.4.
- Range NSTOP=24, Δt=450 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial file: B0302005071500L.C024.032l.L15.

3.1.6 AHLH: Hydrostatic adiabatic forecast with SL2TL advection scheme, stretched geometry.

- Resolution: TL030L15c2.4.
- Range NSTOP=24, Δt=900 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0302005071500L.C024.032l.L15, B0302005071500M.C024.032l.L15.

3.1.7 MHEH, MHSH, MHLH:

diabatic versions of AHEH, AHSH, AHLH with complete physics.

3.1.8 ANEY: Non hydrostatic adiabatic forecast with EUL advection scheme, stretched geometry.

- Resolution: TL030L15c2.4.
- Range 3 hours, Δt=450 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial file: B0302005071500L.C024.032l.L15.NH.

3.1.9 ANSY: Non hydrostatic adiabatic forecast with SL3TL advection scheme, stretched geometry.

- Resolution: TL030L15c2.4.
- Range 3 hours, Δt=1800 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial file: B0302005071500L.C024.032l.L15.NH.

3.1.10 ANLY: Non hydrostatic adiabatic forecast with SL2TL advection scheme, stretched geometry.

- Resolution: TL030L15c2.4.
- Range 3 hours, Δt=1800 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0302005071500L.C024.032l.L15.NH.

3.1.11 MNEY, MNSY, MNLY:

diabatic versions of ANEY, ANSY, ANLY.

3.1.12 5HEY: Hydrostatic adiabatic configuration 501 with EUL advection scheme, stretched and unstretched geometries, FD.

- Resolutions: TL031L15c1, untilted TL030L15c2.4 and tilted TL030L15c2.4.
- Range 2 hours, Δt=450 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0312005071500L.C010.032l.L15, B0302005071500L.C024notilt.032l.L15, B0302005071500L.C024.032l.L15.

3.1.13 5HLY: Hydrostatic adiabatic configuration 501 with SL2TL advection scheme, stretched and unstretched geometries, VFE.

- Resolutions: TL031L15c1, untilted TL030L15c2.4 and tilted TL030L15c2.4.
- Range 2 hours, Δt=1200 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0312005071500L.C010.032l.L15, B0302005071500L.C024notilt.032l.L15, B0302005071500L.C024.032l.L15.

3.1.14 5HLZ: Hydrostatic adiabatic configuration 501 with SL2TL advection scheme, stretched and unstretched geometries, SLHD, VFE.

- Resolutions: TL031L15c1, untilted TL030L15c2.4 and tilted TL030L15c2.4.
- Range 2 hours, Δt=1200 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0312005071500L.C010.032l.L15, B0302005071500L.C024notilt.032l.L15, B0302005071500L.C024.032l.L15.

3.1.15 4HEY: Hydrostatic adiabatic configuration 401 with EUL advection scheme, stretched and unstretched geometries, FD.

- Resolutions: TL031L15c1, untilted TL030L15c2.4 and tilted TL030L15c2.4.
- Range 1 hour, Δt=450 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0312005071500L.C010.032l.L15, B0302005071500L.C024notilt.032l.L15, B0302005071500L.C024.032l.L15.

3.1.16 4HLY: Hydrostatic adiabatic configuration 401 with SL2TL advection scheme, stretched and unstretched geometries, VFE.

- Resolutions: TL031L15c1, untilted TL030L15c2.4 and tilted TL030L15c2.4.
- Range 1 hour, Δt=1200 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0312005071500L.C010.032l.L15, B0302005071500L.C024notilt.032l.L15, B0302005071500L.C024.032l.L15.

3.1.17 4HLZ: Hydrostatic adiabatic configuration 401 with SL2TL advection scheme, stretched and unstretched geometries, SLHD, VFE.

- Resolutions: TL031L15c1, untilted TL030L15c2.4 and tilted TL030L15c2.4.
- Range 1 hour, Δt=1200 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0312005071500L.C010.032l.L15, B0302005071500L.C024notilt.032l.L15, B0302005071500L.C024.032l.L15.

3.1.18 6HEX: Hydrostatic diabatic configuration 601 with EUL advection scheme, unstretched geometry, FD.

- Resolution: TL031L15c1.
- Range 12 hours, Δt=1800 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0312005071500L.C010.032l.L15.

3.1.19 6HLX: Hydrostatic diabatic configuration 601 with SL2TL advection scheme, unstretched geometry, VFE.

- Resolution: TL031L15c1.
- Range 12 hours, Δt=1800 s
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial files: B0312005071500L.C010.032l.L15.

3.1.20 5HEX: Hydrostatic diabatic configuration 501 with EUL advection scheme, unstretched geometry, FD.

- Resolution: TL107L70c1.
- Range 2 hours, Δt=360 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: GB1072010011800L.C010.L70bb.108l.

3.1.21 5HLX: Hydrostatic diabatic configuration 501 with SL2TL advection scheme, unstretched geometry, VFE.

- Resolution: TL107L70c1.
- Range 2 hours, Δt=1200 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: GB1072010011800L.C010.L70bb.108l.

3.1.22 4HEX: Hydrostatic diabatic configuration 401 with EUL advection scheme, unstretched geometry, FD.

- Resolution: TL107L70c1.
- Range 1 hour, Δt=360 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: GB1072010011800L.C010.L70bb.108l.

3.1.23 4HLX: Hydrostatic diabatic configuration 401 with SL2TL advection scheme, unstretched geometry, VFE.

- Resolution: TL107L70c1.
- Range 1 hour, Δt=1200 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: GB1072010011800L.C010.L70bb.108l.

3.1.24 FPFA: Off-line 927-type FULL-POS (L2H): NFPOS=2.

- Departure resolution: TL107L70c1.
- Arrival resolution: TL798L70c2.4.
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: GB1072010011800L.C010.L70bb.108l.
- Departure climatology: clim_arpege.tl107.12.m01.
- Arrival climatology: clim_arpege.tl798.01.m01.

3.1.25 FPFB: Off-line 927-type FULL-POS (H2L): NFPOS=2.

- Departure resolution: TL798L70c2.4.
- Arrival resolution: TL107L70c1.
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.
- Departure climatology: clim_arpege.tl798.01.m01.
- Arrival climatology: clim_arpege.tl107.12.m01.

3.1.26 FPSA: Off-line FULL-POS (CFPFMT='MODEL').

- Resolution: TL798L70c2.4.
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.

3.1.27 FPGA: Off-line FULL-POS (CFPFMT='GAUSS').

- Departure resolution: TL798L70c2.4.
- Arrival resolution: TL798L70c2.5 (tilted, FPMUCEN=0.8, FPLOCEN=0.17).
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.

3.1.28 FPLA: Off-line 5 domains FULL-POS with SL2TL advection scheme, stretched geometry.

- Resolution: TL798L70c2.4.
- Range 0 hours, Δt=600 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.
- Arrival resolution: LALON domains GLOB25, GLOB15, GLOB05, EUROC25, EURAT01.
- Other files: departure climatology, arrival climatologies for each LALON domain, filtering matrices for each LALON domain.

3.1.29 FILA: In-line 5 domains FULL-POS with SL2TL advection scheme, stretched geometry.

- Resolution: TL798L70c2.4.
- Range 6 hours, Δt=600 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.
- Arrival resolution: LALON domains GLOB25, GLOB15, GLOB05, EUROC25, EURAT01.
- Other files: departure climatology, arrival climatologies for each LALON domain, filtering matrices for each LALON domain. sel_fila_6.

3.1.30 FPLB: Off-line 5 domains FULL-POS with SL2TL advection scheme, stretched geometry, NH model with LGWADV=T, PC-cheap, ND4SYS=2.

- Resolution: TL798L70c2.4.
- Range 0 hours, Δt=600 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.
- Arrival resolution: LALON domains GLOB25, GLOB15, GLOB05, EUROC25, EURAT01.
- Other files: departure climatology, arrival climatologies for each LALON domain, filtering matrices for each LALON domain.

3.1.31 FILB: In-line 5 domains FULL-POS with SL2TL advection scheme, stretched geometry, NH model with LGWADV=T, PC-cheap, ND4SYS=2.

- Resolution: TL798L70c2.4.
- Range 6 hours, Δt=600 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.
- Arrival resolution: LALON domains GLOB25, GLOB15, GLOB05, EUROC25, EURAT01.
- Other files: departure climatology, arrival climatologies for each LALON domain, filtering matrices for each LALON domain. sel_filb_6.

3.1.32 MHLJ: Hydrostatic diabatic forecast with SL2TL advection scheme, stretched geometry.

- Resolution: TL798L70c2.4.
- Range 6 hours, Δt=600 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.

3.1.33 MHLK: Hydrostatic diabatic forecast with SL2TL advection scheme, stretched geometry. Cf. MHLJ but with restart.

- Resolution: TL798L70c2.4.
- Range 6 hours, Δt=600 s
- Date of the initial situation: 18 Jan 2010 00TU.
- Initial file: F7982010011800L.C024.L70bb.operassim.

3.1.34 MHLI: Hydrostatic diabatic forecast with SL2TL advection scheme, stretched geometry. Cf. MHLJ but with IO server.

3.1.35 C923: Configuration 923.

- Resolution: TL798c2.4.

3.1.36 C901: Configuration 901 (conversion from ECMWF MARS files to ARPEGE files).

- Number of layers: 137.
- Date of the initial situation: 10 Jul 2013 00TU.
- Initial files: ana.20130710.00.alti_glob.grb, ana.20130710.00.alti_st511.grb, ana.20130710.00.sol_glob.grb, ana.20130710.00.ssol_glob.grb.

3.1.37 FPMB and FPMC: Off-line 5 domains FULL-POS to make filtering matrices, stretched geometry.

- Resolution: TL798c2.4.
- LALON domains: GLOB25, GLOB15, GLOB05, EUROC25, EURAT01.
- Other files: departure climatology, arrival climatologies for each LALON domain, dilatation-contraction matrices.

3.1.38 Other tasks, which are not regularly validated.

- FPSU: does a FULL-POS transformation to change the vertical repartition of levels, then tests if the new set of vertical levels can be used with VFE and LVFE_REGETA=F.
- FPSV: adds NH fields or grid-point humidity on files.
- DILA: makes dilatation/contraction matrices.
- RGRI: makes reduced Gaussian grids.

3.2 Domains, resolutions, files, scripts and namelists involved in each configuration, for LAM model.

Scripts and namelists are not given extensively, but name is now generally:

- Script: jobl_[code]_e[conf]_[compl].
- Namelist: naml_[code]_e[conf]_[compl].

In [compl] we find some information like that:

- 2dm: adiabatic 2D hydrostatic model.
- nh2dm: adiabatic 2D non-hydrostatic model.
- nhsad: adiabatic non-hydrostatic model.
- nh: non-hydrostatic model.
- eul: Eulerian advection.
- sl3: 3TL semi-Lagrangian advection.
- sl2: 2TL semi-Lagrangian advection.
- phys: diabatic run.
- physb: diabatic run with very simplified physics.
- oper: close to operational configuration.
- slhd: semi-Lagrangian horizontal diffusion.
- d4: use "d4" as prognostic variable (NH model).
- fr: ALADIN-FRANCE domain.
- idfi: incremental DFI initialisation.

Examples:

- jobl_ag1t_e001_fr_oper: close to operational ALADIN-FRANCE forecast ("e001" means ALADIN configuration 1).
- jobl_an1t_e001_nhsad_d4_sl2: adiabatic configuration 1, NH model, "d4" as prognostic variable, 2TL semi-Lagrangian scheme.

3.2.1 Group 1: Hydrostatic validations with a small file.

∗ Initial situation and files used:

- Domain and resolution: ALADIN-PORTUGAL L15.
- Date of the initial situation: 23 Jan 2008 00TU.
- Initial file: PGAL_20080123r0_L15_INIT.
- Coupling file range 0h: PGAL_20080123r0_L15_COUPL0000.
- Coupling file range 3h: PGAL_20080123r0_L15_COUPL0003.
- Δx=21.296 km.

∗ Tasks and additional information:

- AH1E: Hydrostatic adiabatic E001 with Eulerian advection scheme. Range 30 mn, Δt=60 s.
- AH1S: Hydrostatic adiabatic E001 with SL3TL advection scheme. Range 2h, Δt=240 s.
- AH1T: Hydrostatic adiabatic E001 with SL2TL advection scheme. Range 3h, Δt=450. s.
- AH5E: Hydrostatic adiabatic E501 with Eulerian advection scheme. Range 7 timesteps, Δt=60 s.
- AH5T: Hydrostatic adiabatic E501 with SL2TL advection scheme. Range 7 timesteps, Δt=240 s.
- AH4E: Hydrostatic adiabatic E401 with Eulerian advection scheme. Range 7 timesteps, Δt=60 s.
- AH4T: Hydrostatic adiabatic E401 with SL2TL advection scheme. Range 7 timesteps, Δt=240 s.
- AH6E: Hydrostatic with Buizza physics E601 with Eulerian advection scheme. Range 1 h, Δt=60 s.
- AH6T: Hydrostatic with Buizza physics E601 with SL2TL advection scheme. Range 3 h, Δt=240 s.

3.2.2 Group 2: Non-hydrostatic validations with a small file.

∗ Initial situation and files used:

- Domain and resolution: SOUTHERN FRANCE L15.
- Date of the initial situation: 14 Jun 2001 00TU.
- Initial file: FROC_20010614r0_L15_NH_INIT.
- Coupling file range 0h: FROC_20010614r0_L15_NH_COUPL0000.
- Coupling file range 3h: FROC_20010614r0_L15_NH_COUPL0003.
- Δx=4.415 km.

∗ Tasks and additional information:

- AN1E: Non-hydrostatic adiabatic E001 with Eulerian advection scheme. Range 30 timesteps, Δt=10 s.
- AN1S: Non-hydrostatic adiabatic E001 with SL3TL advection scheme. Range 30 timesteps, Δt=30 s.
- AN1T: Non-hydrostatic adiabatic E001 with SL2TL advection scheme. Range 30 timesteps, Δt=30 s.

3.2.3 Group 3: Validations with 1D model.

∗ AHUT: Hydrostatic 1D model with SL2TL advection scheme, ALADIN physics.

- Range 3h, Δt=240. s.
- Domain and resolution: 1D column, L79.
- Initial file: FILE1D_ARMCU_L79_ALD.

∗ ARUT: Hydrostatic 1D model with SL2TL advection scheme, AROME physics.

- Range 3h, Δt=60. s.
- Domain and resolution: 1D column, L79.
- Initial file: FILE1D_ARMCU_L79_ARO.
- Additional file for SURFEX: FILE1D_PREPSURF_IDEALFLUX_1997.fa.

3.2.4 Group 4: Validations with 2D model.

∗ AH2S: Hydrostatic adiabatic 2D model with SL3TL advection scheme.

- Range 200 timesteps, Δt=400 s.
- Domain and resolution: meridian-vertical 2D, mesh-size 3.2 km, meridian elongation 192 km, L20.
- Date of the initial situation: 01 Jan 1998 00TU.
- Initial file: DOM2D_L100_19980101r0_INIT.
- Coupling file: identical to initial file.

∗ AH2T: Hydrostatic adiabatic 2D model with SL2TL advection scheme.

- Range 100 timesteps, Δt=800 s.
- Domain and resolution: meridian-vertical 2D, mesh-size 3.2 km, meridian elongation 192 km, L20.
- Date of the initial situation: 01 Jan 1998 00TU.
- Initial file: DOM2D_L100_19980101r0_INIT.
- Coupling file: identical to initial file.

∗ AN2S: Non-hydrostatic adiabatic 2D model with SL3TL advection scheme.

- Range 200 timesteps, Δt=0.05 s.
- Domain and resolution: meridian-vertical 2D, mesh-size 20 m, meridian elongation 3200 m, L39.
- Date of the initial situation: 01 Jan 1998 00TU.
- Initial file: DOM2D_A004_19980101r0_INIT.
- Coupling file: identical to initial file.

* AN2T: Non-hydrostatic adiabatic 2D model with SL2TL advection scheme.

- Range 200 timesteps, Δt=0.05 s.
- Domain and resolution: meridian-vertical 2D, mesh-size 20 m, meridian elongation 3200 m, L39.
- Date of the initial situation: 01 Jan 1998 00TU.
- Initial file: DOM2D_A004_19980101r0_INIT.
- Coupling file: identical to initial file.

3.2.5 Group 5: AH9E: Hydrostatic E927 and EE927.

* E927 ARPEGE towards ALADIN ("cou", NFPOS=2):

- Domain and resolution: dep=ARPEGE-METROPOLE L60, arr=ALADIN-FRANCE L60.
- Date of the initial situation: 15 Feb 2009 00TU.
- Initial file: F5382009021500L.C024.L60jj.operprod.
- Departure climatology: clim_arpege.tl538.02.m02.
- Arrival climatology: clim_france.09km51.14.m02.

* E927 ARPEGE towards AROME ("aru", NFPOS=2):

- Domain and resolution: dep=ARPEGE-METROPOLE L70, arr=AROME L60.
- Date of the initial situation: 13 Jan 2011 12TU.
- Initial file: F7982011011312L.C024.L70bb.operprod.
- Departure climatology: clim_arpege.tl798.02.m01.
- Arrival climatology: clim_arome.m01.

* EE927 AROME-2.5 towards AROME-PYR0.5 ("arunes", NFPOS=2):

- Domain and resolution: dep=AROME-2.5 L60, arr=AROME-PYR0.5 L90.
- Date of the initial situation: 13 Jan 2011 12TU.
- Initial file: AROM_20110113r12_INIT.
- Departure climatology: clim_arome.m01.
- Arrival climatology: clim_arome_pyr500.m01.

3.2.6 Group 6: AHFE and AHME: Hydrostatic FULLPOS tests.

* AHFE "mod":

- Domain and resolution: dep=ALADIN-FRANCE L60, arr=ALADIN-FRANCE L60.
- Date of the initial situation: 15 Jan 2010 03TU.
- Initial file: FRAN_20100115r0_ope_analyse+0003.
- Climatology: none.

* AHFE "gri1":

- Domain and resolution: dep=ALADIN-FRANCE L60, arr=ALADIN-FRANCE L60.
- Date of the initial situation: 15 Jan 2010 03TU.
- Initial file: FRAN_20100115r0_ope_analyse+0003.
- Climatology: none.

* AHFE "gri2":

- Domain and resolution: dep=ALADIN-FRANCE L60, arr=ALADIN-BELGIQUE L60.
- Date of the initial situation: 15 Jan 2010 03TU.
- Initial file: FRAN_20100115r0_ope_analyse+0003.
- Climatology: none.

* AHFE "lal":

- Domain and resolution: dep=ALADIN-FRANCE L60, arr=FRANX01.
- Date of the initial situation: 15 Jan 2010 03TU.
- Initial file: FRAN_20100115r0_ope_analyse+0003.
- Climatology: none.

∗ AHFE “lam1”:

- Domain and resolution: dep=ALADIN-FRANCE L60, arr=LELAM quadratic grid (mesh-size 2.5 km, 192∗288 points, centered on MIDI-PYRENEES) L60.
- Date of the initial situation: 15 Jan 2010 03TU.
- Initial file: FRAN_20100115r0_ope_analyse+0003.
- Climatology: none.

∗ AHFE “lam2” (E927):

- Domain and resolution: dep=ARPEGE L70, arr=ALADIN-LACE20 L70.
- Date of the initial situation: 15 Jul 2005 00TU.
- Initial file: B0312005071500L.C010.032l.L70bb.
- Climatology: none.

∗ AHFE “ope2”:

- Domain and resolution: dep=ALADIN-FRANCE L60, arr=FRANX01 L60.
- Date of the initial situation: 15 Jan 2010 03TU.
- Initial file: FRAN_20100115r0_ope_analyse+0003.
- Departure climatology: clim_france.09km51.14.m01.
- Arrival climatology: clim_dap.franx01.10.m01.

∗ AHFE “opex”:

- Domain and resolution: dep=ALADIN-FRANCE L60, arr=ALADIN-FRANCE L60.
- Date of the initial situation: 15 Jan 2010 03TU.
- Initial file: FRAN_20100115r0_ope_analyse+0003.
- Climatology: none.

∗ AHFE “inl” (diabatic in-line, SL2TL):

- Range 3 hours, Δt=450 s
- Domain and resolution: dep=ALADIN-FRANCE L60, arr=ALADIN-FRANCE L60.
- Date of the initial situation: 10 Jul 2008 00TU.
- Initial file: FRAN_20080710r0_analyse+0000.
- Coupling file range 0h: FRAN_20080710r0_ope_COUPL0000.
- Coupling file range 3h: FRAN_20080710r0_ope_COUPL0003.
- Climatology: none.

∗ AHME “lamars”:

- Domain and resolution: dep=ARPEGE-METROPOLE L70, arr=AROME (surface fields required for SURFEX only).
- Date of the initial situation: 13 Jan 2011 12TU.
- Initial files: F7982011011312L.C024.L70bb.operprod and PGDFILE.fa.
- Departure climatologies: clim_arpege.tl798.02.m01 and PGDFILE.fa.
- Arrival climatology: clim_arome.m01.
- Produces a “FA” file.

3.2.7 Group 7: Configuration 1, 401, 501 with large domains, operational-type validations.

∗ AGIT: Hydrostatic incremental DFI with SL2TL advection scheme.

- Range 0 hours, timespan of the DFI = 3h, Δt=450. s.
- Domain and resolution: ALADIN-FRANCE, L60.
- Date of the initial situation: 10 Jul 2008 00TU.
- Initial files: FRAN_20080710r0_analyse+0000 and FRAN_20080709r18_guess+0006.
- Coupling file range 0h: FRAN_20080710r0_ope_COUPL0000.

∗ AG1T: Hydrostatic oper-type E001 (48 hour + SL2TL + oper physics).

- Range 12h, Δt=450. s.
- Domain and resolution: ALADIN-FRANCE L70.
- Date of the initial situation: 15 Oct 2011 00TU.
- Initial file: FRAN_20111015r0_analyse+0000.
- Coupling files: FRAN_20111015r0_ope_COUPL00[00,..,48].

∗ AA1T: Hydrostatic LACE E001 (48 hour + SL2TL + ALARO physics).

- Range 12h, Δt=360. s.
- Domain and resolution: ALADIN-LACE L43.
- Date of the initial situation: 25 Jan 2007 00TU.
- Initial file: LACE_20070125r0_analyse+0000.
- Coupling files: LACE_20070125r0_COUPL00[00,..,48].

∗ AC1T: Hydrostatic rotated Mercator domain E001 (12 hour + SL2TL + ALADIN physics without SURFEX, domain GRANLMRT).

- Range 12h, Δt=450 s.
- Domain and resolution: ALADIN-GRANLMRT L70.
- Date of the initial situation: 15 Oct 2011 00TU.
- Initial file: GRANLMRT_20111015r0_L70bb_INIT.
- Coupling files: GRANLMRT_20111015r0_L70bb_COUPL00[00,03,..,12].

∗ AC1U: Non-hydrostatic rotated Mercator domain E001 (12 hour + SL2TL + ALADIN physics without SURFEX, domain GRANLMRT).

- Range 12h, Δt=450 s.
- Domain and resolution: ALADIN-GRANLMRT L70.
- Date of the initial situation: 15 Oct 2011 00TU.
- Initial file: GRANLMRT_20111015r0_L70bb.NH_INIT.
- Coupling files: GRANLMRT_20111015r0_L70bb.NH_COUPL00[00,03,..,12].

∗ AR1T: NH AROME E001 with physics.

- Range 4h, Δt=60 s.
- Domain and resolution: AROME grand domaine, L60.
- Date of the initial situation: 2 Nov 2009 00TU.
- Initial file: AROM_20091102r0_INIT.
- Coupling files: AROM_20091102r0_COUPL00[00,01,..,04].
- Additional file for SURFEX: AROM_20091102r0_TEST.fa.

3.2.8 Group 8: Configurations making climatological files and PGD.

- AXCX: E923 Domains: ALADIN-LACE, ALADIN-FRANCE, ALADIN-REUNION, LAT-LON domain FRANX01.
- AXSY: make PGD file for AROME. Domains: LAT-LON domain FRANX01.

3.2.9 Other tasks, which are not regularly validated.

- AS1T: cf. AR1T but on a larger domain.
- AI1T: HIRLAM forecast.

3.3 List and numbering of global model monoproc jobs launched by MITRAILLETTE for standard validation done on beaufix.

```
------------------------------------------------------------------------------------------------------------
000 : C923; Conf 923; domain=ARP METROPOLE ; dm1; 1 nd; 24 td;
001 : C901; Conf 901; dm1; 1 nd; 24 td;
------------------------------------------------------------------------------------------------------------
```

3.4 List and numbering of global model multiproc jobs launched by MITRAILLETTE for standard validation done on beaufix.

```
------------------------------------------------------------------------------------------------------------
000 : AHEA; Conf 001HYD euler adiab TL031L15c1; no DFI; dm8; 2 nd; 6 td;
001 : AHSA; Conf 001HYD sl3tl adiab TL031L15c1; no DFI; dm8; 2 nd; 6 td;
002 : AHLA; Conf 001HYD sl2tl adiab TL031L15c1; no DFI; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------
003 : AHEH; Conf 001HYD euler adiab TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
004 : AHSH; Conf 001HYD sl3tl adiab TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
005 : AHLH; Conf 001HYD sl2tl adiab TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
006 : MHEH; Conf 001HYD euler TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
007 : MHSH; Conf 001HYD sl3tl TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
008 : MHLH; Conf 001HYD sl2tl TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------
009 : ANEY; Conf 001NH euler adiab TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
010 : ANSY; Conf 001NH sl3tl adiab TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
011 : ANLY; Conf 001NH sl2tl adiab TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
012 : MNEY; Conf 001NH euler TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
013 : MNSY; Conf 001NH sl3tl TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
014 : MNLY; Conf 001NH sl2tl TL030L15c2.4; DFI; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------
015 : 5HEY; Conf 501HYD euler adiab TL031L15c1 and TL030L15c2.4; FD; no DFI; dm8; 2 nd; 6 td;
016 : 5HLY; Conf 501HYD sl2tl adiab TL031L15c1 and TL030L15c2.4; VFE; no DFI; dm8; 2 nd; 6 td;
017 : 5HLZ; Conf 501HYD sl2tl adiab TL031L15c1 and TL030L15c2.4; VFE; SLHD; no DFI; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------
018 : 4HEY; Conf 401HYD euler adiab TL031L15c1 and TL030L15c2.4; FD; no DFI; dm8; 2 nd; 6 td;
019 : 4HLY; Conf 401HYD sl2tl adiab TL031L15c1 and TL030L15c2.4; VFE; no DFI; dm8; 2 nd; 6 td;
020 : 4HLZ; Conf 401HYD sl2tl adiab TL031L15c1 and TL030L15c2.4; VFE; SLHD; no DFI; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------
021 : 6HEX; Conf 601HYD euler TL031L15c1; FD; no DFI; dm8; 2 nd; 6 td;
022 : 6HLX; Conf 601HYD sl2tl TL031L15c1; VFE; no DFI; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------
023 : 5HEX; Conf 501HYD euler TL107L70c1; FD; no DFI; dm32; 16 nd; 12 td;
024 : 5HLX; Conf 501HYD sl2tl TL107L70c1; VFE; no DFI; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------
025 : 4HEX; Conf 401HYD euler TL107L70c1; FD; no DFI; dm32; 16 nd; 12 td;
026 : 4HLX; Conf 401HYD sl2tl TL107L70c1; VFE; no DFI; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------
027 : FPFA; Conf 001HYD FPOS NFPOS2-L2H; CFPFMT=GAUSS; OFF-LINE; dm32; 16 nd; 12 td;
028 : FPFB; Conf 001HYD FPOS NFPOS2-H2L; CFPFMT=GAUSS; OFF-LINE; dm32; 16 nd; 12 td;
029 : FPSA; Conf 001HYD FPOS; CFPFMT=MODEL; OFF-LINE; dm32; 16 nd; 12 td;
030 : FPGA; Conf 001HYD FPOS; CFPFMT=GAUSS; OFF-LINE; dm32; 16 nd; 12 td;
031 : FPLA; Conf 001HYD FPOS 5 domains; CFPFMT=LALON; OFF-LINE; dm32; 16 nd; 12 td;
032 : FILA; Conf 001HYD FPOS 5 domains; CFPFMT=LALON; IN-LINE; dm32; 16 nd; 12 td;
033 : FPLB; Conf 001NH FPOS 5 domains; CFPFMT=LALON; OFF-LINE; dm32; 16 nd; 12 td;
034 : FILB; Conf 001NH FPOS 5 domains; CFPFMT=LALON; IN-LINE; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------
035 : MHLJ; Conf 001HYD sl2tl TL798L70c2.4; DFI; LegTransf=std; dm32; 16 nd; 12 td;
036 : MHLJ; Conf 001HYD sl2tl TL798L70c2.4; DFI; LegTransf=flt; dm32; 16 nd; 12 td;
037 : MHLK; Conf 001HYD sl2tl TL798L70c2.4 with restart; DFI; dm32; 16 nd; 12 td;
038 : MHLI; Conf 001HYD sl2tl TL798L70c2.4; DFI; io_server; LegTransf=std; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------
039 : FPMB; Conf 001 FPOS (makes filtering matrices; input RD matrices); CFPFMT=LALON; OFF-LINE; dm32; 16 nd; 12 td;
040 : FPMC; Conf 001 FPOS (makes filtering matrices; no input RD matrices); CFPFMT=LALON; OFF-LINE; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------
```

3.5 List and numbering of LAM model monoproc jobs launched by MITRAILLETTE for standard validation done on beaufix.

```
------------------------------------------------------------------------------------------------------------------------
000 : AHUT; Conf 001HYD-1D sl2tl with ARPEGE/ALADIN physics; dm1; 1 nd; 24 td;
001 : ARUT; Conf 001HYD-1D sl2tl with AROME physics; dm1; 1 nd; 24 td;
------------------------------------------------------------------------------------------------------------------------
002 : AH2S; Conf 001HYD-2D sl3tl; DFI; dm1; 1 nd; 24 td;
003 : AH2T; Conf 001HYD-2D sl2tl; DFI; dm1; 1 nd; 24 td;
------------------------------------------------------------------------------------------------------------------------
004 : AN2S; Conf 001NH-2D sl3tl; no DFI; NoPCiter; d4; dm1; 1 nd; 24 td;
005 : AN2T; Conf 001NH-2D sl2tl; DFI; FullPCiter; d4; Settls; RDbbc; dm1; 1 nd; 24 td;
006 : AN2T; Conf 001NH-2D sl2tl; DFI; FullPCiter; d4; Nesc; RDbbc; dm1; 1 nd; 24 td;
007 : AN2T; Conf 001NH-2D sl2tl; DFI; FullPCiter; d4; Nesc; GWadv; dm1; 1 nd; 24 td;
------------------------------------------------------------------------------------------------------------------------
008 : AHME; Conf 001HYD FPOS LAMARS; LELAM=F; CFPFMT=LELAM; C+I+E; OFF-LINE; dm1; 1 nd; 24 td;
------------------------------------------------------------------------------------------------------------------------
009 : AXCX; Conf 923; domain=lelam_lace; dm1; 1 nd; 24 td;
010 : AXCX; Conf 923; domain=lelam_france; dm1; 1 nd; 24 td;
011 : AXCX; Conf 923; domain=lelam_reunion; dm1; 1 nd; 24 td;
012 : AXCX; Conf 923; domain=lalon_franx01; dm1; 1 nd; 24 td;
------------------------------------------------------------------------------------------------------------------------
013 : AXSY; make PGD file for AROME; dm1; 1 nd; 24 td;
------------------------------------------------------------------------------------------------------------------------
```

3.6 List and numbering of LAM model multiproc jobs launched by MITRAILLETTE for standard validation done on beaufix.

```
------------------------------------------------------------------------------------------------------------------------
000 : AH1E; Conf 001HYD euler; DFI; Thin-layer; dm8; 2 nd; 6 td;
001 : AH1E; Conf 001HYD euler; DFI; Deep-layer; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
002 : AH1S; Conf 001HYD sl3tl; DFI; Thin-layer; FD; no SLHD; dm8; 2 nd; 6 td;
003 : AH1S; Conf 001HYD sl3tl; DFI; Deep-layer; FD; no SLHD; dm8; 2 nd; 6 td;
004 : AH1S; Conf 001HYD sl3tl; DFI; Thin-layer; VFE; no SLHD; dm8; 2 nd; 6 td;
005 : AH1S; Conf 001HYD sl3tl; DFI; Thin-layer; FD; SLHD; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
006 : AH1T; Conf 001HYD sl2tl; DFI; Thin-layer; FD; no SLHD; dm8; 2 nd; 6 td;
007 : AH1T; Conf 001HYD sl2tl; DFI; Deep-layer; FD; no SLHD; dm8; 2 nd; 6 td;
008 : AH1T; Conf 001HYD sl2tl; DFI; Thin-layer; VFE; no SLHD; dm8; 2 nd; 6 td;
009 : AH1T; Conf 001HYD sl2tl; DFI; Thin-layer; FD; SLHD; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
010 : AH5E; Conf 501HYD euler; no DFI; FD; no SLHD; dm8; 2 nd; 6 td;
011 : AH5T; Conf 501HYD sl2tl; no DFI; FD; no SLHD; dm8; 2 nd; 6 td;
012 : AH5T; Conf 501HYD sl2tl; no DFI; VFE; no SLHD; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
013 : AH4E; Conf 401HYD euler; no DFI; FD; no SLHD; dm8; 2 nd; 6 td;
014 : AH4T; Conf 401HYD sl2tl; no DFI; FD; no SLHD; dm8; 2 nd; 6 td;
015 : AH4T; Conf 401HYD sl2tl; no DFI; VFE; no SLHD; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
016 : AH6E; Conf 601HYD euler; no DFI; FD; no SLHD; dm8; 2 nd; 6 td;
017 : AH6T; Conf 601HYD sl2tl; no DFI; FD; no SLHD; dm8; 2 nd; 6 td;
018 : AH6T; Conf 601HYD sl2tl; no DFI; VFE; no SLHD; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
019 : AN1E; Conf 001NH euler; DFI; Thin-layer; FullPCiter; d4; dm8; 2 nd; 6 td;
020 : AN1E; Conf 001NH euler; DFI; Deep-layer; FullPCiter; d4; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
021 : AN1S; Conf 001NH sl3tl; DFI; Thin-layer; NoPCiter; d4; dm8; 2 nd; 6 td;
022 : AN1S; Conf 001NH sl3tl; DFI; Thin-layer; NoPCiter; d4; RDbbc; dm8; 2 nd; 6 td;
023 : AN1S; Conf 001NH sl3tl; DFI; Deep-layer; NoPCiter; d4; dm8; 2 nd; 6 td;
024 : AN1S; Conf 001NH sl3tl; DFI; Deep-layer; NoPCiter; d4; RDbbc; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
025 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; FullPCiter; d4; Settls; FD; dm8; 2 nd; 6 td;
026 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; FullPCiter; d4; Nesc; FD; dm8; 2 nd; 6 td;
027 : AN1T; Conf 001NH sl2tl; DFI; Deep-layer; FullPCiter; d4; Settls; FD; dm8; 2 nd; 6 td;
028 : AN1T; Conf 001NH sl2tl; DFI; Deep-layer; FullPCiter; d4; Nesc; FD; dm8; 2 nd; 6 td;
029 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; FullPCiter; d4; Nesc; RDbbc; FD; dm8; 2 nd; 6 td;
030 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; CheapPCiter; d4; Nesc; RDbbc; FD; dm8; 2 nd; 6 td;
031 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; FullPCiter; d4; Nesc; RDbbc; FD; ND4SYS=2; dm8; 2 nd; 6 td;
032 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; FullPCiter; d4; Nesc; RDbbc; VFE; dm8; 2 nd; 6 td;
033 : AN1T; Conf 001NH sl2tl; DFI; Deep-layer; FullPCiter; d4; Nesc; RDbbc; FD; dm8; 2 nd; 6 td;
034 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; FullPCiter; d4; Nesc; GWadv; FD; dm8; 2 nd; 6 td;
035 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; CheapPCiter; d4; Nesc; GWadv; FD; ND4SYS=2; dm8; 2 nd; 6 td;
036 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; FullPCiter; d4; Nesc; GWadv; FD; ND4SYS=2; dm8; 2 nd; 6 td;
037 : AN1T; Conf 001NH sl2tl; DFI; Thin-layer; FullPCiter; d4; Nesc; GWadv; VFE; dm8; 2 nd; 6 td;
038 : AN1T; Conf 001NH sl2tl; DFI; Deep-layer; FullPCiter; d4; Nesc; GWadv; FD; dm8; 2 nd; 6 td;
039 : AN1T; Conf 001NH sl2tl; DFI; Deep-layer; FullPCiter; d4; Nesc; GWadv; VFE; dm8; 2 nd; 6 td;
------------------------------------------------------------------------------------------------------------------------
040 : AH9E; Conf 001HYD E927-NFPOS2 COU; dm32; 16 nd; 12 td;
041 : AH9E; Conf 001HYD E927-NFPOS2 ARU; dm32; 16 nd; 12 td;
042 : AH9E; Conf 001HYD EE927-NFPOS2 ARUNES; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------------------
043 : AHFE; Conf 001HYD FPOS MOD; LELAM=T; CFPFMT=MODEL; OFF-LINE; dm32; 16 nd; 12 td;
044 : AHFE; Conf 001HYD FPOS GRI1; LELAM=T; CFPFMT=LELAM; C+I; OFF-LINE; dm32; 16 nd; 12 td;
045 : AHFE; Conf 001HYD FPOS GRI2; LELAM=T; CFPFMT=LELAM; C+I; OFF-LINE; dm32; 16 nd; 12 td;
046 : AHFE; Conf 001HYD FPOS LAL; LELAM=T; CFPFMT=LALON; OFF-LINE; dm32; 16 nd; 12 td;
047 : AHFE; Conf 001HYD FPOS LAM1; LELAM=T; CFPFMT=LELAM; C+I+E; OFF-LINE; dm32; 16 nd; 12 td;
048 : AHFE; Conf 001HYD FPOS LAM2=E927; LELAM=F; CFPFMT=LELAM; C+I+E; OFF-LINE; dm8; 2 nd; 6 td;
049 : AHFE; Conf 001HYD FPOS OPE2; LELAM=T; CFPFMT=LALON; OFF-LINE; dm32; 16 nd; 12 td;
050 : AHFE; Conf 001HYD FPOS OPEX; LELAM=T; CFPFMT=LELAM; C+I; OFF-LINE; dm32; 16 nd; 12 td;
051 : AHFE; Conf 001HYD FPOS INL; LELAM=T; CFPFMT=MODEL; IN-LINE; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------------------
052 : AGIT; Conf 001HYD sl2tl (IDFI test); DFI; dm32; 16 nd; 12 td;
053 : AG1T; Conf 001HYD sl2tl (cf. oper); DFI; dm32; 16 nd; 12 td;
054 : AA1T; Conf 001HYD sl2tl (cf. ALARO); DFI; dm32; 16 nd; 12 td;
055 : AC1T; Conf 001HYD sl2tl (rot. Mercator GRANLMRT); DFI; dm32; 16 nd; 12 td;
056 : AC1U; Conf 001NH sl2tl (rot. Mercator GRANLMRT); DFI; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------------------
057 : AR1T; Conf 001 sl2tl (cf. AROME); no DFI; CheapPCiter; NH d4; Nesc; GWadv; nd4sys=2; COMAD; dm32; 16 nd; 12 td;
058 : AR1T; Conf 001 sl2tl (cf. AROME); no DFI; CheapPCiter; NH d4; Nesc; GWadv; nd4sys=2; dm32; 16 nd; 12 td;
059 : AR1T; Conf 001 sl2tl (cf. AROME); no DFI; FullPCiter; NH d4; Nesc; GWadv; nd4sys=2; dm32; 16 nd; 12 td;
060 : AR1T; Conf 001 sl2tl (cf. AROME); no DFI; NoPCiter; hydrostatic; Settls; COMAD; dm32; 16 nd; 12 td;
061 : AR1T; Conf 001 sl2tl (cf. AROME); no DFI; NoPCiter; hydrostatic; Settls; dm32; 16 nd; 12 td;
062 : AR1T; Conf 001 sl2tl (cf. AROME); no DFI; CheapPCiter; NH d4; Nesc; GWadv; nd4sys=2; COMAD; io_server; dm32; 16 nd; 12 td;
------------------------------------------------------------------------------------------------------------------------
```

4 References:

- (IDMITR) Vanda Sousa da Costa, A. Deckmyn, A. Dziedzic, N. Bouzouita and G. Bölöni, 2006: MITRAILLETTE: procedure to validate a release of the code Aladin, version 4. Internal note, available on "http://www.cnrm.meteo.fr/gmapdoc/" (topics "Coding, phasing, porting").
- (IDARC) Yessad, K., 2015: Library architecture and history of the technical aspects in ARPEGE/IFS, ALADIN and AROME in the cycle cycle 42 of ARPEGE/IFS. Internal note, available on "http://www.cnrm.meteo.fr/gmapdoc/" (topics "Coding, phasing, porting").

5 Expected future releases and expected modifications:

5.1 Release v102015:

- Expected october 2015.
- Designed to validate CY42T1.
- Adaptation to cy41_op1 environment when relevant.
- Update file environment when necessary (new version of SURFEX).

5.2 Release v032016:

- Expected march 2016.
- Designed to validate CY42T1 on the upgraded machine.
- Porting to the upgraded machine.
- Namelist environment must be provided for CY42 and CY41T1 too.

5.3 Release v042016:

- Distinct from v032016 if necessary only.
- Expected april 2016.
- Designed to validate CY43.